NREL
NATIONAL RENEWABLE ENERGY LABORATORY

National Renewable Energy Laboratory

Managed and Operated by the Alliance for Sustainable Energy, LLC

Request for Proposals Number RCI-0-40497

"Development of Computer Aided Design Tools for Automotive Batteries"

REQUEST FOR PROPOSALS

READ THIS DOCUMENT CAREFULLY

This solicitation is being conducted under the procedures for competitive subcontracts established by the National Renewable Energy Laboratory (NREL). NREL will award a subcontract based on the following.

All Statement of Work (SOW) requirements being met with the best combination of:

- Technical factors (based on qualitative merit criteria), and
- Evaluated price (or cost)

Issue Date: 07/30/10 **Due Date: 08/31/10** Time Due: 04:30p.m. Mountain Time

Technical questions must be received in writing no later than 08/09/10

1. Solicitation Type Best Value Selection

Submit offers to and request information from the NREL RFP Contact below:

2. NREL RFP Contact Kathee Flanagan Roque, Senior Supervisor
National Renewable Energy Laboratory
1617 Cole Boulevard, MS: 1533
Golden, CO 80401-3393
Email: Kathee.Roque@nrel.gov

Electronic (PDF) copies of forms and appendices can be found at:
http://www.nrel.gov/business_opportunities/related_docs.html

No hand-delivered proposals will be accepted. Original proposal must be shipped by overnight courier or the United States Postal Service; .pdf files accepted as described in Section 9.c and 9.d of this RFP

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3. Background

The National Renewable Energy Laboratory (NREL) is issuing this Request for Proposals (RFP) to co-fund subcontractors to develop computer aided design tools for batteries intended for Electric Drive Vehicles (EDV). The goal for these design tools is to shorten the prototyping and manufacturing cycles and optimize batteries for improved performance, safety, long life, and low cost in EDVs.

EDVs, such as Hybrid Electric Vehicle (HEV), Plug-In Hybrid Electric Vehicles (PHEVs), and Electric Vehicles (EVs), have the potential to significantly reduce petroleum consumption and dependence on imported oil while improving emission of greenhouse gasses and criteria pollutants. Switching from petroleum to electricity provides the opportunity to use energy from renewable sources such as solar, wind, and biomass for transportation. One of the major barriers to the mass adoption of these electric drive vehicles is their affordability, due to high cost and limited performance and life of their battery, particularly lithium-ion. Currently the battery industry depends mostly on the expensive and time consuming process and cycle of design-build-test-break for prototyping and manufacturing of these batteries. Sophisticated battery modeling and simulation design tools are not widely available and are not as advanced as some of the tools available for internal combustion engines.

In support of the development of advanced batteries for electric drive vehicles and the Nation's goals of significantly reducing dependence on imported petroleum, the Vehicle Technologies Program at the U.S. Department of Energy (DOE) initiated an activity called Computer Aided Engineering for Electric Drive Vehicle Batteries (CAEBAT) in April of 2010. The objective of this activity is to introduce battery simulation and modeling design tools to the development of batteries at early stages to reduce many steps in the design-build-test-break prototyping and manufacturing process. CAEBAT activities will be performed by national labs, industry, academia and other R&D institutions, with NREL integrating the overall effort for DOE.

The industry's involvement on cell and pack level modeling in CAEBAT activity will be funded through this competitive procurement process. As part of this effort, NREL is seeking organizations from industry and academia to serve as subcontractors to help develop computer aided design tools for automotive batteries. The focus of the effort for these subcontracts is to develop multi-physics simulation models capturing realistic three-dimensional geometries and configurations of cell level and pack level of batteries or other energy storage devices that could meet the requirements of electric drive vehicles. The models need to address electrochemical, thermal, mechanical, chemical, electrical, and/or structural physics in cells and battery packs.

4. Project description

The objective of this project is to develop suites of software tools that enable automobile and battery manufacturers, pack integrators, and other end-users to simulate and design battery packs and accelerate development of energy storage systems that meet EDV

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requirements. Since there are a number of electrodes, components, and cell level models that have already been developed at national laboratories, academia, and even industry, it is desirable to utilize these models to integrate them in the proposed cell or pack modeling efforts, if applicable, as a way to reduce project cost and speedier development time. NREL is seeking subcontractors to perform the work outlined in the accompanying Statement of Work (SOW), which is broken down into three major tasks:

1. Battery Cell Level Model Development,
2. Battery Pack Level Model Development, and
3. Interface Development to Interact with the CAEBAT Open Architecture Software.

Under Task 1, the Subcontractor shall develop software tools that incorporate a **cell's** electrochemical, thermal, life, cost, and/or safety in 3-D realistic geometry of cells. Under Task 2, the Subcontractor shall develop software tools that incorporate the **pack's** electrochemical, electrical, thermal, life, cost, and/or safety in 3-D realistic geometry of packs. Under Task 3, the Subcontractor shall develop **interfaces** to make the interactions with other design tools through the CAEBAT OAS practical. Each task shall be integrated with the input/output of the other tasks.

These task areas, required stage gates, and deliverables are fully described in the Statement of Work.

Offerors may propose on a combination of Tasks 1 and 3, Tasks 2 and 3, or all three Tasks in the Statement of Work. However, no proposal will be accepted that addresses only Task 3.

Special Considerations:

- Any energy storage device that meets EDV requirements, such as batteries or symmetric and asymmetric capacitors may be considered.

- It is important to note that *Figure 1. CAEBAT Program Structure, its Four Elements and Potential Sub-elements* (Appendix A – Statement of Work, page 3) is not a comprehensive list of possible sub-elements that proposals can model, nor is it a requirement that each proposal must address all sub-elements. Rather, the intent of this RFP is to select proposal(s) that create CAE software programs which model battery cell and pack parameters that are able to incorporate as many other sub-element models as possible.

- As project integrator, NREL will not be a subcontractor for any application. However, NREL is a resource for Offerors to use NREL's modeling tools in their proposals. DOE will provide funding to NREL to continue development and optimization of NREL's modeling tools and to be a resource for other organizations, including selected proposals. Applicants are not required to utilize NREL's models for this RFP, nor will NREL's proposed participation as a resource be a factor in evaluation scoring/selection process. If applicants choose to use NREL's models, the DOE will provide minimal funding support for NREL to incorporate and/or modify its models for the Offeror's application. The proposals should specify any modification to NREL's model that would be required, should that proposal be selected.

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- o All national laboratories may be used as resources within the proposal; however, *no national laboratory may be the prime or lower-tier subcontractor as a result of this competitive RFP.* The cost of the national laboratory(ies)'s contribution may not be included in the overall cost of the project, nor in a proposal's cost-share contribution, as the national laboratories are directly funded by DOE.

5. Proposed subcontract award and period of performance

The Alliance for Sustainable Energy, LLC has entered into Contract No. DE-AC36-08GO28308 with the Department of Energy (DOE), an agency of the U.S. Government, for the management and operation of the National Renewable Energy Laboratory (hereinafter called "NREL"). All references to "NREL" in this solicitation shall mean the Alliance for Sustainable Energy, LLC.

It is the intent of NREL to award up to **five** Cost-Sharing subcontract(s) under this RFP. The anticipated period of performance is provided in Table 1, below.

Table 1

Task	Base Period	After Stage-Gate Period
Task 3.1: Battery Cell Model Development	Up to 8 months after award	Month 9 to 36 months after award
Task 3.2: Battery Pack Model Development	Up to 12 months after award	Month 13 to 36 months after award
Task 3.3: Interface Developments to Interact with CAEBAT OAS	6 months to 18 months after award	Month 19 to 36 months after award

NREL's funding availability is approximately $2.5 million per 12-month period for a total of $7.5 million for 36 month period. A minimum of 50% cost sharing is required. The *approximate* funded amount, and potential budget range by task per 12 month period, is as shown on Table 2:

Table 2

Task	NREL's Estimated Funding	Minimum Cost Share (50%)	12-month Estimated Total	36-month Estimated Total
Task 1	Up to $1,000,000	$1,000,000	$2,000,000	$ 6,000,000
Task 2	Up to $1,300,000	$1,300,000	$2,600,000	$ 7,800,000
Task 3	Up to $ 200,000	$ 200,000	$ 400,000	$ 1,200,000
Estimated 12-month Total	Up to $2,500,000	$2,500,000	$5,000,000	$15,000,000

Based upon the estimated project timeline from Table 1, the planned schedule for the Deliverables and Stage Gates are as follows (next page):

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Table 3

Deliverable	Stage Gate	Description	Proposed Due Date
5.1.1		First version of Cell-Level Software Tool	Aug 2011 (month 8)
	1.1	Decision of first version of the Cell-Level Software Tool	Sep 2011 (month 9)
5.1.2		Report detailing experimental data to validate and verify Cell models	Dec 2011 (month 12)
	1.2	Decision on validation and verification of the first version of the Cell Design Tool	Jan 2012 (month 13)
5.1.3		Beta version of Cell-Level Software Tool	Feb 2012 (month 14)
	1.3	Decision on acceptance of Beta version of Cell-Level software tool	Mar 2012 (month 15)
5.1.4		Final version of Cell-Level Software Tool	Aug 2012 (month 20)
5.1.5		Final report - Cell-Level Software Tool	Aug 2012 (month 20)
5.2.1		First version of Pack-Level Software Tool	Dec 2011 (month 12)
	2.1	Decision on first version of Pack-Level Software Tool	Jan 2012 (month 13)
5.2.2		Report detailing experimental data to validate and verify Pack Models	Jun 2012 (month 18)
	2.2	Decision on validation and verification of Pack Models	Jul 2012 (month 19)
5.2.3		Beta version of Pack-Level Software Tool	Dec 2012 (month 24)
	2.3	Decision on acceptance of Beta version of Pack-Level Software Tool	Jan 2012 (month 25)
5.2.4		Final version of Pack-Level Software Tool	Dec 2013 (month 36)
5.2.5		**Final report - Pack-Level Software Tool**	**Dec 2013 (month 36)**
5.3.1		First version of Interface Code to interact with CAEBAT Open Architecture Software	June 2012 (month 18)
	3.1	Decision on acceptance of the first version of Interface Code to interact with CAEBAT OAS	July 2012 (month 19)
5.3.2		Final version of Interface Code to interact with CAEBAT Open Architecture Software	June 2013 (month 30)

6. Competitive negotiated subcontract using Best Value Selection

This solicitation shall be conducted using Best Value Selection that results in an award that is most advantageous to NREL based on the best value combination of (a) evaluated qualitative merit and (b) evaluated price (cost) of the offers submitted.

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Best Value Selection is based on the premise that, if all offers are of approximately equal qualitative merit, award will be made to the offeror with the lowest evaluated price (cost). However, NREL will consider awarding to an offeror with a higher evaluated price (cost) if the offer demonstrates the difference in price (cost) is commensurate with the higher qualitative merit. Conversely, NREL will consider awarding to an offeror with a lower evaluated qualitative merit if the price (cost) differential between it and other offers warrant doing so.

7. Qualitative merit criteria for Best Value Selection

The Statement of Work (see NREL website) in this Request for Proposals serves as NREL's baseline requirements that must be met by each offer.

The qualitative merit criteria establish what NREL considers the technical factors valuable in an offer. These qualitative merit criteria are performance-based and permit selection of a higher priced offer that provides higher qualitative merit.

The following qualitative merit criteria will be used to determine the technical value of the offer in meeting the objectives of the solicitation.

Each qualitative merit criteria and its assigned weight are provided below.

7.1 Technical Approach (45%)

- How the proposed effort builds on or expands on prior efforts and current state-of-the-art while allowing for broadness of application for general design.
- Scientific soundness and technical feasibility of the proposed effort.
- Adequacy of discussion of the current state of development of the proposed effort, including any modeling or laboratory data and test results.
- Adequacy of discussion on commercialization of the software design tools.
- Responsiveness and relevance of the application to the goals and requirements identified in this announcement for this area of interest.
- Discussion of the commercialization strategy for the proposed technology or product and of the intellectual property rights and/or institutional alliances to execute the commercialization strategy.
- Discussion of the viability and practicality of the proposed technology, product, or information to meet the needs of the target market in a cost effective manner without major market restructuring considering potential technical, regulatory, economic, environmental, production, or other issues impacting market success.

Note: Subcriteria 7.1.1 – 7.1.3 are weighted in descending order.

7.1.1 Task 3.1 Battery Cell Model Developments

- Addressing the appropriate physics, scales and dimensions in cells.
- Merit and mathematical approach for solving various physics for cell modeling.
- Computational efficiency of solution technique; expected time to reach solutions.
- Use of existing and acceptable models and codes.

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- Robustness and accuracy of solution techniques.
- Degree of addressing complex 3-D geometry and configuration of real cells.
- Degree to which various chemistries and cell geometries could be modeled.
- Verification approach.
- Cell model validation capabilities and experience and model accuracy.
- User-friendliness.
- Ability to interface with stand-alone component-level and pack level models.
- Degree to which the tool could be used by battery developers, battery integrators and car makers.
- Expertise in electrochemistry modeling.

7.1.2 Task 3.2 - Battery Pack Model Development

- Addressing the appropriate physics, scales and dimensions in packs.
- Merit and mathematical approach for solving various physics for from cell to pack modeling.
- Computational efficiency of solution technique; expected time to reach solutions.
- Use of existing and acceptable models and codes.
- Method to detailed 3-D information.
- Robustness and accuracy of solution techniques.
- Degree of addressing complex 3-D geometry and configuration of real battery pack.
- Use of existing solution techniques such CFD, FEA thermal and structural models.
- Verification approach.
- Pack model validation capabilities and experience and model accuracy.
- User friendliness.
- Ability to interface with stand-alone cell-level or vehicle level models
- Degree to which the tool could be used by battery developers, battery integrators and car makers.
- Ability to robust design and optimization studies.
- Expertise in multi-scale and multi-physics modeling

7.1.3 Task 3.3 Interface Development to Interact with CAEBAT Open Architecture Software

- Approach for interacting with CAEBAT OAS Workgroup and understanding and exchanging requirements.
- Capabilities for standardization of interface.
- Past experience in linking various tools and software together.

7.2 Project Plan (20%)

- Partnering agreements or letters of collaboration(s) (if applicable);
- Management approach (including partner management, NREL interaction / communication, and task and resource allocation);

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- Overall schedule (Gant chart or time table) for the project and detailed schedule for each Task.
- Risk factors and mitigation strategies. Degree and nature of the identified risk in demonstrating the proposed approaches.
- Adequacy and thoroughness of the approach to successfully meet the project objectives, including plans to address key risks and issues to the viability of the technology.
- Adequacy of the validation plan to address operational and performance aspects of the technology.
- Adequacy and appropriateness of the schedule, including the duration and sequencing of tasks and the scheduling of project milestones and decision points.
- The planned level of manpower.
- Planned travel.

7.3 Capabilities and Facilities (15%)

- The Offeror's accessibility to the necessary facilities and equipment (e.g. , computing capabilities, battery testing equipment, various solvers) to validation of the model.
- The Offeror's capability to provide support to commercial software.
- The Offeror's past experience with integrating tools developed for various scales and dimensions.
- Agreements with eventual vendors for the design tool, if any.

7.4 Experience and Past Performance (20%)

- Dedicated key personnel with relevant expertise and experience to complete the project.
- Identify Roles and responsibilities of each Team Organization and team members within each team organization.
- Includes relevant analytical, mathematical, technical, project management, test, and quality staff among others.
- A half-page bio and resume (CV) of all key personnel shall be provided with the proposal as an attachment.
- Experience of the Offeror's team in taking initial developmental models to design tools to be distributed to industry.
- Understanding of electrochemistry, thermal, fluid flow, electrical, mechanical, and or chemical abuse in cells and packs.
- Intimate knowledge of automotive battery cell and pack design and manufacturing practices.
- Offerors must have a proven record of successfully completing projects in relevant topics. In particular, it is required that Offerors proposing to perform testing and/or field installations of batteries have past experience with such work.
- Provide examples of previous successful projects performed and fully describe how those projects are relevant to the Statement of Work. For each example, provide contract number and entity with which the project was contracted, value of the contract and period of performance. Also provide a point of contact with name, phone number and email address.

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8. Price (cost) evaluation for Best Value Selection

After evaluation of the qualitative merit criteria, the following price (cost) evaluation will be used to determine the best value of the offer in meeting the objectives of the solicitation.

The combined qualitative merit value will be considered substantially more important than the price (cost).

9. Evaluation process

NREL will evaluate offers in two general steps:

Step One—Initial Evaluation
An initial evaluation will be performed to determine if all required information has been provided for an acceptable offer. Offerors may be contacted only for clarification purposes during the initial evaluation. Offerors shall be notified if their offer is determined unacceptable and the reasons for rejection will be provided. Unacceptable offers will be excluded from further consideration.

Step Two—Discussion, Selection, Negotiation, and Award

All acceptable offers will be evaluated against the Statement of Work (see NREL website) and the qualitative merit criteria listed above. Based on this evaluation, NREL has the option, depending on the specific circumstances of the offers received, to use one of the following methods of selection:

(a) make individual selection(s), conduct negotiations, and make an award(s);

(b) conduct parallel negotiations with all offerors and make award(s);

(c) conduct discussions with all offerors, select successful finalists, conduct parallel negotiations with successful finalists, and then make award(s);

(d) conduct discussions with all offerors, conduct parallel negotiations with the finalists, select successful finalist(s), and then make award(s);

(e) select successful finalists, conduct successive negotiations, and make successive selections and awards;

(f) make no award(s).

10. Proposal preparation information

a. The proposal must include a title page, including the RFP title and number, name of your organization and principal investigator (with postal address, telephone and fax numbers, and email address). The title should be succinct and capture the essence of your offer.

b. Formatting instructions
- A page is defined as one side of an 8 ½” x 11” sheet of paper.
- Use a 12-point font.
- Maintain at least 1-inch margins on all sides.

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- Copies may be either single or double sided.

c. A **technical proposal** in an original and one hard copy, ***plus one separate .pdf file*** will be submitted, directed toward meeting the requirements of NREL's Statement of Work (see NREL website) and qualitative merit criteria (see item 7 above). The technical proposal shall be organized in the following sections:

1. Cover Page (1 page maximum)

2. Executive Summary (1 page maximum)

3. Technical Approach (21 pages maximum: up to 8 pages for Task 1; up to 10 pages for Task 2; up to 3 pages for Task 3)

4. Project Plan (5 pages maximum)

5. Capabilities and Facilities. (5 pages maximum)

6. Key Personnel, including Roles and Responsibility of Each Team Organization (3 pages maximum)

7. Experience and Past Performance (5 pages maximum)

The total **technical proposal** shall not exceed 41 pages, not including resumes or CVs. NOTE: *Resumes/CVs shall not include Social Security numbers.*

d. Completed "**Price/Cost Proposal**" form in an original and one hard copy, ***plus one separate .pdf file,*** submitted with the offer (see NREL website).

i. ***The Offeror shall submit a cost proposal form for each year per Task proposed, and a separate cost proposal form that summarizes the total proposed cost of each Task and project total.*** An individual Offeror's cost proposal standard format can be used if the data included is substantially the same as the NREL form. Defense Contracting Audit Agency (DCAA) audit/contact information should also be provided, if available.

ii. The Offeror's cost proposal and delivery terms must be valid for 90 days from the date of the offer.

iii. ***The cost proposal must include support documentation for all categories of the proposed cost, separated by task, separated by year of the total performance period, and a total project summary.***

iv. ***The cost proposal must include a minimum of 50% cost share.***

v. ***The cost proposal must separate cost for lower-tier subcontract(s), and include support documentation for all categories of the proposed lower-tier subcontract(s) cost.***

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vi. In addition to the above cost proposal requirements, the Offeror shall include the following information in the cost proposal submission:

- Support documentation for proposed indirect rates to include forward pricing rate agreements or schedules of cost by "Fiscal Years" for the proposed performance period. If available, provide copies of current approved indirect rate agreements.

- Copy of audit report for any review (audit) of accounts or records in connection with any other Government Prime Contract or Subcontract within the past 12 months. If a copy of the audit report is not available, please provide the name, address, phone number, and email address of the contact within the reviewing office.

- Identify any contracts or subcontracts awarded for the same or similar services within the past three (3) years. Please provide the customer(s) and subcontract (number(s)

.

- Identify the accounting system start and ending month of the Offeror's fiscal year.

NOTE: If the information listed above is not included in the cost proposal, it may result in a delay in proposal evaluation.

e. A completed "**Representations and Certifications**" form in an original and three (3) copies (see NREL website).

f. EITHER the **"Organizational Conflicts of Interest Representation Statement"** OR the **"Organizational Conflicts of Interest Disclosure Statement"** (see NREL website), as applicable.

g. A cover letter including a **summary statement** indicating acceptance of the proposed Statement of Work or any change with the reason(s) (see NREL website).

h. A cover letter including either acceptance or change/exception with reason to the subcontract schedule and the standard terms and conditions and/or the intellectual property terms and conditions in the appendices. The offeror will explain any proposed change/exception with respect to the subcontract schedule and terms and conditions. Any proposed change/exception must contain sufficient amplification and justification to permit evaluation. Such proposed changes/exceptions will not, of themselves, automatically cause an offer to be termed unacceptable. However, a large number of proposed changes/exception or one or more significant exceptions not providing any obvious benefit to the NREL or the Department of Energy may result in rejection of such offer as unacceptable.

i. This solicitation <u>does not</u> commit NREL to pay costs incurred in the preparation and submission of a proposal in response to this RFP.

11. Solicitation Provisions—full text provided

a. Late submissions, modifications, and withdrawals of offers

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Offers, or modifications to them, received from qualified organizations after the latest date specified for receipt may be considered if received prior to award, and NREL determines that there is a potential price (cost), technical, or other advantage, as compared to the other offers received. However, depending on the circumstances surrounding the late submission or modification, NREL may consider a late offer to be an indication of the offeror's performance capabilities, resulting in downgrading of the offer in the technical evaluation process. Offers may be withdrawn by written notice received at any time before award. Offers may be withdrawn in person by an offeror or an authorized representative, if the representative's identity is made known and the representative signs a receipt for the offer before award.

b. Restrictions on disclosure and use of data

Offerors who include in their proposals data that they do not want disclosed to the public for any purpose or used by the government or NREL, except for evaluation purposes shall—

1. Mark the title page with the following legend:
   "This offer includes data that shall not be disclosed outside the government or NREL and shall not be used or disclosed—in whole or in part—for any purpose other than to evaluate this offer. If, however, a subcontract is awarded to this offeror as a result of—or in connection with—the submission of this data, the government or NREL shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting subcontract. This restriction does not limit the government or NREL's right to use information contained in this data if obtained from another source without restriction. The data subject to this restriction are contained on pages [insert page and line numbers or other identification of pages] of this offer"; and

2. Mark each page of data it wishes to restrict with the following legend:
   "Use or disclosure of data contained on this page is subject to the restriction on the title page of this offer."

c. Notice of right to receive patent waiver (derived from DEAR 952.227-84) and technical data requirements.

Offerors (and their prospective lower-tier subcontractors) in accordance with applicable statutes and Department of Energy Acquisition Regulations, (derived from DEAR 952.227-84) have the right to request a waiver of all or any part of the rights of the United States in inventions conceived or first actually reduced to practice in performance of the subcontract that may be awarded as a result of this solicitation, in advance of or within thirty (30) days after the effective date of subcontracting. Even where such advance waiver is not requested or the request is denied, the subcontractor will have a continuing right during the subcontract to request a waiver of the rights of the United States in identified, individual inventions.

Domestic small business firms, educational institutions, and domestic nonprofit organizations normally will receive the clause: Patent Rights - Retention by the

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Subcontractor, which permits the offeror to retain title to subject inventions, except in subcontracts involving exceptional circumstances or intelligence activities. Therefore, domestic small business firms, educational institutions, and domestic nonprofit organizations normally need not request a waiver.

If an offeror's proposal includes a lower-tier subcontract to another organization, that lower-tier organization's business type will determine the applicable intellectual property provisions that will apply to the lower-tier subcontract. Note that a lower-tier subcontractor may apply for a patent waiver under the same conditions as the offeror.

Under a research, development, and demonstration project, the Department of Energy and NREL are unable to ascertain, prior to receipt of offers or performance of the project, their actual needs for technical data. It is believed that the requirements contained herein are the basic needs of the Department of Energy and NREL. However, if the offeror indicates in its proposal that proprietary data will be used or withheld under its proposed effort, the Department of Energy and NREL reserve the right to negotiate appropriate rights to the proprietary data. The appropriate rights may include "Limited Rights in Proprietary Data" and/or "Subcontractor Licensing."

d. Disclaimer

NEITHER THE UNITED STATES; NOR THE DEPARTMENT OF ENERGY; NOR ALLIANCE FOR SUSTAINABLE ENERGY, LLC; NOR ANY OF THEIR CONTRACTORS, SUBCONTRACTORS, OR THEIR EMPLOYEES MAKE ANY WARRANTY, EXPRESS OR IMPLIED, OR ASSUME ANY LEGAL LIABILITY OR RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR USEFULNESS FOR ANY PURPOSE OF ANY OF THE TECHNICAL INFORMATION OR DATA ATTACHED OR OTHERWISE PROVIDED HEREIN AS REFERENCE MATERIAL.

e. Solicitation disputes

The General Accountability Office and the Department of Energy do not accept or rule on disputes for solicitations for Requests for Proposals issued by Management and Operating Contractors for the Department of Energy (operators of Department of Energy National Laboratories). Should an offeror have any concerns regarding the NREL solicitation process or selection determination, the offeror may contact Mark Barela, Advocate for Commercial Practices, at (303) 384-7559. NREL will address each concern received from an offeror on an individual basis.

f. Small Business (Lower-Tier) Subcontracting Plan (derived from FAR 52.219-9)

The following requirement does not apply to small business offerors.

Proposals submitted in response to this solicitation shall include a lower-tier subcontracting plan that separately addresses lower-tier subcontracting with small business, small disadvantaged business, and women-owned small business concerns. If the offeror is submitting an individual subcontract plan, the plan must separately address lower-tier subcontracting with small business, small disadvantaged business, and women-owned small business concerns, with a

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separate part for the basic subcontract and separate parts for each option (if any). The plan shall be included in and made a part of the resultant subcontract. The lower-tier subcontracting plan shall be negotiated within the time specified by the NREL Subcontract Administrator. Failure to submit and negotiate a lower-tier subcontracting plan shall make the offeror ineligible for award of a subcontract. (see Attachment 5) [OR] (see NREL website)

12. Solicitation provisions—incorporated by reference—general access

This solicitation incorporates one or more solicitation provisions by reference with the same force and effect as if they were given in full text. The following documents can be downloaded from the NREL **general access** website at http://www.nrel.gov/business_opportunities/related_docs.html or the NREL RFP Contact (see item 2) will make full text available upon request.

- Statement of Work dated July 26, 2010
- Sample Subcontract Schedule
  - Cost –Sharing
- NREL Standard Terms and Conditions:
  - Appendix B-1 (01/18/10)
- NREL Intellectual Property Provisions:
  - Appendix C-1 or C-2 (10/28/98)
- NREL Terms and Conditions for Subcontracts in excess of $500,000.00
  - Appendix D-1 (05/10/10)
- NREL Representations and Certifications for Subcontracts
- NREL Price/Cost Proposal Form and Instructions
- NREL Conflicts of Interest Forms
- NREL Small Business (Lower-tier) Subcontracting Plan Requirements

13. NAICS Code and Small Business Size Standard

a. The North American Industry Classification System (NAICS) for this solicitation :

NAICS	Description	See b.
335911	Storage Battery Manufacturing	500
335912	Primary Battery Manufacturing	1,000
335999	All Other Miscellaneous Electrical Equipment and Component Manufacturing	500
336111	Automobile Manufacturing	1,000

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335112	Light Truck & Utility Vehicle Mfg	1,000
335113	Heavy Duty Truck Manufacturing	1,000
336322	Other Motor Vehicle Electrical & Electronic Equipment Manufacturing	750
641330	Engineering Services	$27.0M
541511	Custom Computer Programming Services	$27.0M
541519	Other Computer Related Services	$25.0M
541690	Other Scientific & Technical Consulting Services	$ 7.0M
541990	All Other Professional, Scientific & Technical Services	$ 7.0M

b. The small business size standards shown in the table above indicate the number of employees, or less, in whole numbers.

The small business size standards in the table above indicate dollars in annual receipts. (Annual receipts of a concern mean the annual average gross revenue for the last three fiscal years.)

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